

California Regional Water Quality Control Board  
Santa Ana Region

April 26, 2002

ITEM: 18

SUBJECT: WORKSHOP FOR TRIENNIAL REVIEW OF BASIN PLANNING ISSUES

Federal and State law both mandate periodic review of water quality control plans (Basin Plans). Public participation is an important part of this process. The purpose of this workshop is to solicit input from the Regional Board and other interested parties regarding the issues that should be addressed during the current triennial review and the priorities that should be assigned to such work.

The Porter-Cologne Water Quality Control Act, Section 13240 of the Water Code, requires, "Each regional board shall formulate and adopt water quality control plans for all areas within the region... During the process of formulating such plans *the regional boards shall consult with and consider the recommendations of affected state and local agencies*. Such plans shall be periodically reviewed and may be revised."

Section 303 (c)(1) of the Federal Clean Water Act requires, "... the water pollution control agency of such State shall from time to time (but at least once each three year period...) *hold public hearings for the purpose of reviewing applicable water quality standards* and, as appropriate, modifying and adopting standards." Because the review mandated by the Clean Water Act takes place every three years, it is termed a "Triennial Review".

Staff has prepared a draft priority list of issues proposed for review and has estimated the resources necessary to address each issue (Table 1 attachment). This list includes basin planning work already in process (e.g., the Nitrogen/TDS study), the incorporation of TMDLs expected to be completed during this triennial review cycle, recommendations from the United States Environmental Protection Agency and other interested parties, recommendations from staff, and issues that were identified in the prior Triennial Review but that could not be completed due to financial restrictions. The list shown in Table 1 identifies 28 issues and an estimate of total resources (as personal years, or "PYs") required to complete their review. The review of issues will take place from July 2002 to July 2005. Resources include funding supported by TMDL and Nitrogen/TDS resources and the 1.6 PY allocated annually for basin plan review. As noted on Table 1, there are not the resources available to complete a review of all the proposed issues.

Staff has notified interested parties of the triennial review process and this workshop. A presentation concerning the triennial review process was given at the January 2002 Board Meeting. In February of 2002, staff mailed out over 900 triennial review workshop announcements to interested parties. The mailed announcements included the Draft Triennial Review Priority List (Table 1) and a description of each issue (Table 1 and the description of issues are also attached to this staff report). Public notices describing the Triennial Review process and the workshop were published in the major newspapers of the region, also in February. In the announcements, staff requested comments concerning the triennial review process and the priority list from interested parties. Staff

has received several comments and will provide a written response to each comment received.

Staff will incorporate the input received from the interested parties, both written and presented at the workshop, and develop a final list, including an estimate of the staff resources necessary to review listed issues. This list will (tentatively) be presented to the Board for adoption in May or July 2002.

Proposed revisions to the Basin Plan, including water quality standards (that is, both numeric and narrative water quality objectives and beneficial uses) will be presented to the Regional Board for adoption in the future as Basin Plan amendments.

**Table 1**  
**Draft Triennial Review Priority List**

| Issue No. | Issue Description  | Estimated Staff Resources (PYs) |          |          |          |                        |
|-----------|--|---------------------------------|----------|----------|----------|------------------------|
|           |  | FY 01-02                        | FY 02-03 | FY 03-04 | FY 04-05 | Total PYs              |
| 1.        | Address the findings of the Nitrogen/TDS Study: <ul style="list-style-type: none"> <li>Revise water quality objectives for TDS and Nitrogen for groundwater</li> <li>Revise groundwater subbasin boundaries</li> <li>Revise wasteload allocations for TDS and TIN</li> <li>Update TDS/Nitrogen strategies in Chapter 5</li> <li>Consider deletion of water quality objectives/increments for individual mineral constituents (components of TDS)</li> <li>Adopt Reclamation Guidance Document</li> </ul> | [1.0]                           | [2.0]    | [0.5]    | 0        | [3.5] PY <sup>1</sup>  |
| 2.        | Incorporate newly adopted or revised TMDL Basin Plan amendments (e.g., TMDLs for the Newport Bay/San Diego Creek Watershed, Chino Basin, Big Bear Lake and Lake Elsinore).   | [8.0]                           | [8.0]    | [8.0]    | [8.0]    | [32.0] PY <sup>2</sup> |
| 3.        | Review nutrient objectives for San Diego Creek. Incorporate revised objectives in Basin Plan.  | 0.1                             | 0.2      | 0.2      | 0.5      | 1.0 PY <sup>3</sup>    |
| 4.        | Revise objectives for REC-1 and REC-2 uses for surface waters based on USEPA's national criteria ( <i>E. coli</i> and enterococci). Add rationale for the 2.2 mpn/100ml coliform discharge limit for POTWs discharging to the Santa Ana River and its tributaries.   | 0.2                             | 0.9      | 0.9      | 0        | 2.0 PY                 |
| 5.        | Develop criteria for wetlands impact mitigation. Revise wetlands discussion to be consistent with current regulations.   | 0.1                             | 0.1      | 0.2      | 0        | 0.4 PY                 |
| 6.        | Revise numeric objective for residual chlorine for discharges to surface waters.   | 0.1                             | 0.5      | 0.4      | 0.1      | 1.1 PY                 |

1. Nitrogen/TDS Taskforce expected to provide these resources.

2. TMDL rather than Basin Planning resources will be used for the all TMDL-related work.

3. Review of these objectives is a nutrient TMDL implementation task to be funded largely with TMDL resources.

**Table 1**  
**Draft Triennial Review Priority List**  
**(cont.)**

| Issue No. | Issue Description  | Estimated Staff Resources (PYs) |          |          |          |           |
|-----------|--|---------------------------------|----------|----------|----------|-----------|
|           |  | FY 01-02                        | FY 02-03 | FY 03-04 | FY 04-05 | Total PYs |
| 7.        | Remove site specific objectives for copper, cadmium, and lead for middle Santa Ana River reaches and their tributaries.  | 0                               | 0.2      | 0        | 0        | 0.2 PY    |
| 8.        | Establish water quality objectives for Mill/Cucamonga Creek at Prado Basin.  | 0                               | 0.2      | 0.2      | 0        | 0.4 PY    |
| 9.        | Review ammonia objectives based on 1999 USEPA national criteria.   | 0                               | 0.2      | 0.25     | 0        | 0.45 PY   |
| 10.       | Designate new reaches of existing streams, to more accurately assign beneficial uses: <ul style="list-style-type: none"> <li>• San Diego Creek – from upper Newport Bay mean high tide to drop structure upstream of MacArthur Blvd (Reach 1A); include EST</li> <li>• Lytle Creek – from Miller Narrows downstream to Interstate 15 (Intermediate Reach); include WARM</li> <li>• Mill Creek – from Forest Falls Road downstream to Highway 38(Intermediate Reach); include WARM</li> <li>• Santa Ana River – from Alder Creek downstream to Seven Oaks Dam (Reach 6); include WARM</li> <li>• Santa Ana River – from Alder Creek to Headwaters (Reach 7); remain COLD</li> </ul> | 0.1                             | 0        | 0.15     | 0        | 0.25 PY   |
| 11.       | Add the following water bodies to the Basin Plan, and assign appropriate beneficial uses including REC-1, REC-2, WARM, and WILD: <ul style="list-style-type: none"> <li>• Buck Gully, Los Trancos Canyon Creek, Muddy Canyon Creek, Pelican Hill Waterfall, Pelican Point Creek, Pelican Point Middle Creek, and Santa Ana Delhi Channel</li> </ul>  | 0.1                             | 0.2      | 0.2      | 0        | 0.5 PY    |

**Table 1**  
**Draft Triennial Review Priority List**  
**(cont.)**

| Issue No. | Issue Description   | Estimate Staff Resources (PYs) |          |          |          |                       |
|-----------|---|--------------------------------|----------|----------|----------|-----------------------|
|           |   | FY 01-02                       | FY 02-03 | FY 03-04 | FY 04-05 | Total PYs             |
| 12.       | Consider Water Code Section 13241 factors in relation to compliance with water quality objectives during wet weather (especially costs and need for housing).   | 0                              | [2.0]    | [3.0]    | [1.0]    | [6.0] PY <sup>4</sup> |
| 13.       | <b>Substantive editorial changes:</b> <ul style="list-style-type: none"> <li>• Add narrative on Alaska Rule</li> <li>• Add narrative on implementation procedures for turbidity</li> <li>• Add narrative on implementation procedures for toxic objectives</li> <li>• Revise Section 3 Beneficial Use Tables narrative to incorporate Tributary Rule</li> <li>• Revise Section 5 Prohibitions Applying to Inland Surface Waters (saline discharges)</li> <li>• Revise Section 5 Prohibitions Applying to Inland Surface Waters (sewage discharges)</li> </ul>   | 0                              | 0.2      | 0.2      | 0.3      | 0.7 PY                |
| 14.       | Review/revise beneficial uses designations for the following water bodies: <ul style="list-style-type: none"> <li>• Irvine Lake – add IND and COMM</li> <li>• San Diego Creek – add RARE (all reaches)</li> <li>• Lytle Creek (valley reach) – add RARE</li> <li>• Cajon Creek (valley reach – add RARE</li> <li>• City Creek (valley reach) – list reach individually, assign beneficial uses, and designate beneficial uses “X” (existing); add RARE</li> <li>• Peters Canyon Wash – list individually, assign beneficial uses, and designate beneficial uses “X”</li> <li>• San Sevaine Creek – list individually, assign beneficial uses, and designate beneficial uses “X”</li> <li>• Laguna Reservoir – review MUN exception</li> <li>• Lambert Reservoir – review MUN exception</li> <li>• Peters Canyon – review MUN exception</li> <li>• Siphon Reservoir – review MUN exception</li> <li>• Santa Ana River (Reach 4) – add RARE</li> <li>• Shay Meadows – add RARE; change beneficial uses from “I” (intermittent) to “X”.</li> </ul> | 0.3                            | 0.1      | 0.2      | 0.3      | 0.9 PY                |

4. Completion of this task would require funding support from interested parties and assistance from the SWRCB's Economics Unit.

**Table 1**  
**Draft Triennial Review Priority List**  
**(cont.)**

| Issue No. | Issue Description   | Estimated Staff Resources (PYs) |          |          |          |           |
|-----------|---|---------------------------------|----------|----------|----------|-----------|
|           |   | FY 01-02                        | FY 02-03 | FY 03-04 | FY 04-05 | Total PYs |
| 15.       | Add discussion of Designated Maintenance Area ordinances as an avenue of compliance with Prohibitions Applying to Groundwaters, in Chapter 5. | 0                               | 0.05     | 0.1      | 0        | 0.15 PY   |
| 16.       | Reevaluate temperature criteria to ensure full protection of aquatic life.  | 0                               | 0        | 0        | 0.25     | 0.25 PY   |
| 17.       | Update dissolved oxygen objectives for WARM/COLD beneficial uses.   | 0                               | 0        | 0        | 0.25     | 0.25 PY   |
| 18.       | Review silver water quality objective for groundwater.  | 0                               | 0        | 0        | 0.25     | 0.25 PY   |
| 19.       | Revise Animal Confinement Facilities (Dairies) discussion in Chapter 5.   | 0                               | 0        | 0        | 0.25     | 0.25 PY   |
| 20.       | Develop and adopt biological criteria for managing water quality.   | 0                               | 0        | 0        | 2.0      | 2.0 PY    |
| 21.       | Santa Ana River, Reach 3 – add TOC water quality objective.   | 0                               | 0        | 0.1      | 0        | 0.1 PY    |
| 22.       | Update the discussion of implementation of the antidegradation policy in Chapter 2 to address non-point source pollution.                     | 0                               | 0        | 0        | 0.2      | 0.2 PY    |
| 23.       | Review Methylene Blue-Activated Substances (MBAS) water quality objective for surface waters.   | 0                               | 0        | 0        | 0.05     | 0.05 PY   |
| 24.       | Santa Ana River, Reach 3 – clarify the COD water quality objective.   | 0                               | 0        | 0.1      | 0        | 0.1 PY    |
| 25.       | Update Chapter 5 Prohibitions Applying to Inland Surface Waters to include lakes.   | 0                               | 0        | 0.1      | 0        | 0.1 PY    |
| 26.       | Update Chapter 5 Disposal of Hazardous and Nonhazardous Waste to reflect loss of SWAT Program   | 0                               | 0        | 0        | 0.05     | 0.05 PY   |

**Table 1**  
**Draft Triennial Review Priority List**  
**(cont.)**

| Issue No. | Issue Description   | Estimated Staff Resources (PYs) |              |             |              |             |
|-----------|---|---------------------------------|--------------|-------------|--------------|-------------|
|           |   | FY 01-02                        | FY 02-03     | FY 03-04    | FY 04-05     | Total PYs   |
| 27.       | Consider need for clarification of Chapter 5 Minimum Lot Size Requirements and Exemption Criteria for New Developments (using on-site sewage disposal systems). | 0                               | 0            | 0           | 0.1          | 0.1 PY      |
| 28.       | Update the SLIC Program discussion in the Basin Plan.   | 0                               | 0            | 0           | 0.05         | 0.05 PY     |
|           | Resources for Triennial Review  | 0.6                             |              |             |              | 0.6 PY      |
|           | SUBTOTAL  | <u>10.6</u>                     | <u>14.85</u> | <u>14.8</u> | <u>14.25</u> | <u>54.5</u> |
|           | Funding supported by TMDL resources   | [8.0]                           | [8.0]        | [8.0]       | [8.0]        | [32.0]      |
|           | Funding supported by N/TDS Study resources and interested parties.  | [1.0]                           | [4.0]        | [3.5]       | [1.0]        | [9.5]       |
|           | TOTAL TRIENNIAL REVIEW RESOURCES<br>(subtotal resources minus funding supported by TMDL and N/TDS resources, and by interested parties)                         | <u>1.6</u>                      | <u>2.85</u>  | <u>3.3</u>  | <u>5.25</u>  | <u>13.0</u> |

## **2002 TRIENNIAL REVIEW DESCRIPTION OF ISSUES**

### **Issue No. 1**

#### **Address the findings of the Nitrogen/TDS study.**

The 1995 Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) identifies the buildup of salts, including total dissolved solids (TDS) and nitrates, in the waters of the Region as one of the Region's most significant water quality problems. Many of the TDS and nitrogen water quality objectives established in the 1975 Basin Plan are being exceeded. The Basin Plan includes a TDS and nitrogen management plan intended to address this problem. Wastewater reclamation activities tend to add to the mineralization problem and as a result, the TDS/Nitrogen Management Plan in the Basin Plan includes limited reclamation activities. During the 1995 revision of the Basin Plan, a number of wastewater and water supply agencies expressed concern that this TDS/Nitrogen Management Plan limits available wastewater reclamation opportunities in this area of increasing water demand but limited supply. These agencies, through the Santa Ana Watershed Project Authority (SAWPA), have been conducting a watershed-wide review to evaluate the TDS/Nitrogen Management Plan. The overall goal of the study is to consider whether it is appropriate to revise groundwater subbasin boundaries and respective TDS and nitrogen water quality objectives, and to develop a regulatory approach consistent with the Basin Plan and state and federal law and policy that will allow for increased reclamation opportunities in the watershed. Results of the N/TDS review may lead to adoption of a Reclamation Guidance Document (RGD) and the following amendments to the Basin Plan:

- Revision of water quality objectives for TDS and nitrogen for groundwater;
- Revision of groundwater subbasin boundaries;
- Revision of wasteload allocations for TDS and TIN;
- Update of TDS/nitrogen strategies in Chapter 5; and
- Possible deletion of water quality objectives/increments for individual mineral constituents (components of TDS);
- Adopt reclamation guidance document.

#### Estimated Resources:

|                   |   |
|-------------------|---|
| Total Staff time: | 3.5 PY (these resources to be provided by N/TDS study Task Force)       |
| Contract:         | (undetermined; to be provided, if necessary, by N/TDS study Task Force) |
| Duration:         | 4 years   |

### **Issue No. 2**

#### **TMDLs for the Newport Bay/San Diego Creek Watershed, Chino Basin, Big Bear Lake and Lake Elsinore: Development, Basin Plan amendments, Implementation.**

Pursuant to Section 303(d) of the Clean Water Act (CWA), the Regional Board has identified a number of waterbodies in the Region as impaired due to various pollutants. For any waterbody listed as impaired, the CWA requires that a TMDL be established. The TMDL is the allowable amount of a pollutant that can be discharged from all sources, both point and nonpoint, and still ensure that water quality standards are achieved (water quality objectives are met and beneficial uses are protected).

TMDL development was initiated or completed for certain waterbodies/pollutants during the last triennial review cycle. Implementation of approved TMDLs is an ongoing task. During the next 3 year period, Board staff expects to develop TMDLs, and the associated implementation plans, for inclusion in the Basin Plan for the following waterbodies:



- Newport Bay and San Diego Creek for toxic substances, including selenium, diazinon and chlorpyrifos;
- Lake Elsinore for nutrients, sediment and toxics;
- Canyon Lake for nutrients and pathogens;
- Big Bear Lake, Summit Creek, Rathbone Creek and Grout Creek for nutrients;
- Big Bear Lake and Rathbone Creek for sediment;
- Knickerbocker Creek (Big Bear Lake tributary) for pathogens; and,
- Chino Creek, Cucamonga Creek/Mill Creek, Santa Ana River (Reach 3) for pathogens.

Estimated Resources:

Total Staff time: 32 PYs (to be supported by TMDL funds)  
 Contract \$: \$1,200,000  
 Duration: 4 years

### Issue No. 3

#### **Review Nutrient Objectives for San Diego Creek. Incorporate revised objectives in the Basin Plan.**

In 1998, the Regional Board approved a nutrient total maximum daily load (TMDL) for the Newport Bay/San Diego Creek watershed to address eutrophic conditions (nutrient over-enrichment). The TMDL requires the Regional Board to review and revise as necessary the nutrient (total inorganic nitrogen) water quality objectives for San Diego Creek, Reaches 1 and 2, that are now specified in the Basin Plan. These objectives were intended to address the protection of underlying groundwater quality and not necessarily in-stream or in-bay eutrophication. Studies are underway to consider appropriate objectives.

Estimated Resources:

Staff time: 1.0 PY (TMDL funds will be used to conduct most of the work); 1.0 PY of Basin Planning Resources are expected to be required to support amendment of the Basin Plan to incorporate any new objectives  
 Contract \$: \$155,550  
 Duration: 4 years

### Issue No. 4

#### **Revise bacterial objectives for REC-1 and REC-2 uses for surface waters based on USEPA's national criteria (*E. coli* and enterococci). Add rationale for the 2.2 mpn/100 mL total coliform discharge limit for POTWs discharging to the Santa Ana River and its tributaries.**

The 1995 Basin Plan includes a bacterial quality objective for REC-1 waters of a log mean of <200 fecal coliform organisms per 100 mL based on five or more samples per 30 day period. This objective is widely established both in California and the nation as a whole. It was based on studies conducted at bathing beaches in Ohio, Illinois and New York in the late 1940s and early 1950s by the United States Public Health Service. These early studies did not well address or define the relationship between water contaminated with treated sewage and health risks for swimmers. In 1986, the EPA published national criteria guidance *Ambient Water Quality Criteria for Bacteria – 1986* (EPA 440/5-84-002), recommending the use of *Escherichia coli* and enterococci as indicator bacteria. The epidemiological data upon which the criteria guidance is based indicate that *E. coli* and enterococci are better correlated with health effects related to water-contact recreation. USEPA's Action Plan for Beaches and Recreational Waters (EPA/600/R-98/079, March 1999) calls for all states to adopt bacterial standards that are consistent with current EPA guidance by 2003. The use of *E. coli* and enterococci as bacterial indicators is reflected in Title 17 of the California Code of Regulations, Sec. 7956 *et seq.*, regulations for public beaches and ocean water-contact sports areas. These regulations implement Assembly Bill 411.

In regulating the discharge of treated municipal wastewater to the Santa Ana River and other waters that are used for water contact recreation, the Regional Board has implemented the recommendations of the Department of Health Services. The Department's recommendations derive, in part, from the science underlying the Reclamation Criteria developed by the Department for various recycled water uses, including discharges to nonrestricted recreational impoundments. These Criteria are codified in Title 22 of the California Code of Regulations. Briefly, these criteria specify that discharges of recycled water to nonrestricted recreational impoundments (i.e., with REC-1 uses) must be adequately oxidized, coagulated, clarified, filtered and disinfected (tertiary treated or equivalent). The Criteria establish a performance standard of 2.2 mpn/100 mL total coliform to define adequate disinfection. The intent of this standard is to assure that essentially pathogen-free recycled water is produced, for public health protection. The Department also developed wastewater disinfection guidelines for discharges of wastewater to REC-1 surface waters ("Wastewater Disinfection for Public Health Protection"). The disinfection guidelines recommend the same treatment requirements for wastewater discharges to REC-1 waters as those stipulated in Title 22 for supply of recycled water to nonrestricted recreational impoundments, since the public health risks under both scenarios are analogous. Accordingly, to assure the protection of public health, the Board's waste discharge requirements for POTW discharges to REC-1 waters apply this 2.2 mpn/100 mL standard.

Comments have been received regarding this regulatory approach. The comments indicate that: (1) the Reclamation Criteria do not apply to discharges to surface waters and cannot, therefore, be used as the basis of setting effluent limitations in permits for POTW discharges to surface waters; and, (2) there is inconsistency between the 200 fecal coliform organism/100 mL objective and the 2.2 mpn/100 mL standard included in the Board's permits, and this inconsistency must be addressed before the 2.2 mpn/100 mL standard can be lawfully applied. Findings in the Regional Board's waste discharge requirements have been augmented to provide a more detailed explanation of the basis for implementing this standard. However, explanatory language should also be included in the Basin Plan.

Estimated Resources:

Staff time: 2.0 PY

Contract \$: none

Duration: 3 years

**Issue No. 5**

**Develop criteria for mitigating impacts to wetlands and other Waters of the State. Revise wetlands discussion to be consistent with current regulations.**

Staff proposes to develop regional criteria for determining appropriate mitigation when wetlands and other Waters of the State are impacted by various construction activities, primarily those involving dredging and filling. Dredging and filling activities are subject to:

- Permits issued by the U.S. Army Corps of Engineers under Clean Water Act (CWA) Section 404; and,
- Water quality standards certifications issued by the SWRCB or Regional Board (under CWA Section 401).

In some cases, waste discharge requirements are adopted by the Board (pursuant to the California Water Code) for dredge and fill projects. These regulatory actions implement federal and state requirements for "no net loss of wetlands" as a result of land use practices, and state and federal policies encouraging the expansion of existing wetlands and creation of new ones.

Successful mitigation of the loss of wetlands and other Waters of the State depends on a number of factors, including consideration of the ecological functions and values of the impacted area, and the location of the proposed mitigation (within or outside of the impacted watershed), among others. The criteria that staff proposes to develop will enable both staff and the regulated community to more easily

and consistently determine appropriate mitigation projects when wetlands and other Waters of the State are affected by construction or development.

Estimated Resources:

|                  |         |
|------------------|---------|
| Staff time:      | 0.4 PY  |
| Contract \$:     | none    |
| <u>Duration:</u> | 3 years |

**Issue No. 6**

**Revise numeric objective for residual chlorine for discharges to surface waters.**

The Basin Plan currently specifies that the chlorine residual in wastewater discharged to inland surface waters shall not exceed 0.1 mg/L. During the 1994 revision of the Basin Plan, the California Department of Fish and Game commented that this objective is not sufficiently stringent to protect aquatic and wildlife habitat beneficial uses. Board staff initially proposed that the objective be revised to 0.05 mg/L; however, comments were received from Chino Basin MWD (now, Inland Empire Utilities Agency) and Metropolitan Water District that this revised objective might not be achievable with existing wastewater treatment technologies. It was suggested that compliance with a more stringent chlorine residual limit could necessitate complete reconfiguration of wastewater treatment plant treatment trains or application of overly expensive, innovative technologies. By contrast, other comments indicated the 0.05 mg/L objective might not be sufficiently protective of aquatic life. More recently, USEPA has commented that a chlorine objective for ambient surface waters, not simply wastewater discharges, should be included in the Basin Plan. EPA indicates that the residual chlorine objectives should be identified based on a consideration of the EPA's 1984 Ambient Water Quality Criteria – Chlorine (EPA 440/5-84-030 Jan. 1985).

One of the high priority issues identified by the Regional Board during the 1994 and 1998 triennial reviews was to evaluate the residual chlorine objective, but it has not been completed to date because of resource constraints.

Estimated Resources:

|                  |                |
|------------------|----------------|
| Staff time:      | 1.1 PY         |
| Contract \$:     | (undetermined) |
| <u>Duration:</u> | 4 years        |

**Issue No. 7**

**Remove site specific objectives for copper, cadmium, and lead for middle Santa Ana River reaches and their tributaries.**

Site-specific objectives (SSOs) for copper, cadmium, and lead for the Santa Ana River and certain tributaries were incorporated in the 1995 Basin Plan and submitted for review and approval by the USEPA. EPA reserved action on these SSOs in light of its promulgation of the California Toxics Rule (CTR), which incorporated new scientific information concerning the appropriate objectives for these metals that was not available at the time the SSOs were adopted. EPA reserved action to allow the Regional Board to consider whether it would be appropriate to delete the SSOs and to rely instead upon the CTR. Given the new scientific information, it appears appropriate to withdraw the SSOs in favor of the numeric water quality criteria in the CTR.

Estimated Resources:

|                  |        |
|------------------|--------|
| Staff time:      | 0.2 PY |
| Contract \$:     | none   |
| <u>Duration:</u> | 1 year |

**Issue No. 8****Establish water quality objectives for Mill/Cucamonga Creek at Prado Basin.**

This is an issue remaining from the 1998 Triennial Review. Cucamonga Creek flows into Mill Creek, which is a major tributary to the Santa Ana River in the Prado area. Currently there are no water quality objectives for Mill Creek. Appropriate objectives should be developed to assure appropriate regulation of waste discharges and to protect beneficial uses.

Estimated Resources:

Staff time: 0.4 PY  
Contract \$: undetermined

Duration: 2 years

**Issue No. 9****Review ammonia objectives based on 1999 USEPA national criteria.**

The 1995 Basin Plan incorporated new site-specific objectives for un-ionized ammonia (the toxic form of ammonia) for the Santa Ana River and certain tributaries. These objectives are implemented by limitations on ammonia in waste discharges to these waters. The requisite effluent ammonia limits are also specified in the Basin Plan. Finally, the 1995 Basin Plan includes revised, basin-wide un-ionized ammonia objectives. EPA reserved action regarding approval of these new objectives and requested that Board staff submit additional technical justification.

EPA published revised national criteria guidance for ammonia in the Federal Register on December 22, 1999. The revised criteria are based on new scientific information concerning un-ionized ammonia toxicity. Board staff has advised EPA that given this new science, it does not appear worthwhile to pursue EPA approval of the objectives in the Basin Plan. Staff advised EPA that we would recommend that review of these objectives (and associated implementation provisions) be included in the Triennial Review list. EPA is expected to promulgate criteria for states failing to adopt numerical objectives consistent with the new criteria by 2004.

Estimated Resources:

Staff time: 0.45 PY  
Contract \$: undetermined

Duration: 2 years

**Issue No. 10****Designate new reaches of existing streams, to more accurately assign beneficial uses.**

In order to more accurately assign existing wildlife habitat beneficial uses, a number of new reaches of currently listed waters should be designated, including the following:

- San Diego Creek – from Upper Newport Bay mean high tide to drop structure upstream of MacArthur Blvd. (Reach 1A); include EST
- Lytle Creek – from Miller Narrows downstream to Interstate 15 (Intermediate Reach); include WARM;
- Mill Creek – from Forest Falls Road downstream to Highway 38 (Intermediate Reach); include WARM;
- Santa Ana River – from Alder Creek downstream to Seven Oaks Dam (Reach 6); include WARM;
- Santa Ana River – from Alder Creek to Headwaters (Reach 7); remain COLD

Estimated Resources:

Staff time: 0.25 PY  
 Contract \$: none  
Duration: 2 years

**Issue No. 11**

**Add the following water bodies to the Basin Plan, and assign appropriate beneficial uses, including REC-1, REC-2, WARM and WILD:**

- **Buck Gully, Los Trancos Canyon Creek, Muddy Canyon Creek, Pelican Hill Waterfall, Pelican Point Creek, Pelican Point Middle Creek, and Santa Ana Delhi Channel.**

These waters were not specifically included in the 1995 Basin Plan. Los Trancos, Muddy Canyon and Pelican Point Creeks discharge to Crystal Cove, which is an Area of Special Biological Significance (ASBS), and Santa Ana Delhi Channel discharges to Upper Newport Bay. Appropriate beneficial uses and water quality objectives need to be identified.

Estimated Resources:

Staff time: 0.5 PY  
 Contract \$: undetermined  
Duration: 3 years

**Issue No. 12**

**Consider Water Code Section 13241 factors in relation to compliance with water quality objectives during wet weather (especially costs and need for housing).**

During the consideration of reissuance of the areawide stormwater NPDES permit for those parts of Orange County within the Santa Ana Region, the co-permittees expressed concern about their ability to comply, and the costs of compliance, with established water quality objectives during wet weather. The co-permittees questioned whether the factors cited in Section 13241 of the California Water Code, especially costs and the need for housing in the area had been taken into account in establishing the objectives. The adopted permit states that Board staff would recommend that this matter be placed on the Triennial Review list. Staff believes that such a review would likely be a major undertaking. It will be necessary for the affected stakeholder community to provide resources to assist in this effort.

Estimated Resources:

Staff time: 6.0 PY  
 Contract \$: undetermined  
Duration: 3 years

**Issue No. 13****Substantive editorial changes**

Substantive narrative revisions to the 1995 Basin Plan include the following:

- Add narrative on Alaska Rule. On April 27, 2000, USEPA published a final rule (65 FR 24641) regarding when state water quality standards become effective for CWA purposes. This rule, known as "EPA Review and Approval of State and Tribal Water Quality Standards," provides that state water quality standards, or amendments to such standards, submitted to EPA for approval after May 30, 2000 (effective date of the rule), must be approved by EPA before such standards or amendments may be implemented for CWA purposes. The Basin Plan should be updated to reflect this regulation.
- Add narrative on implementation procedures for turbidity. USEPA has recommended that the Basin Plan should explain how turbidity standards are to be implemented (e.g., how "natural turbidity" is to be determined and what measures are used to control turbidity when the standard is exceeded).

- Add narrative on implementation procedures for toxic substances objectives. The Toxic Substances objective in Chapter 4 of the 1984 Basin Plan was changed to three separate narrative objectives addressing: (1) bioaccumulation of toxic substances; (2) contaminant concentrations in drinking water sources; and (3) water column, sediment and biota toxic pollutant concentrations adversely affecting beneficial uses. USEPA has recommended that the first narrative objective under Toxic Substances should be amended to read: *Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to aquatic organisms, other wildlife, and human health.* EPA also recommended that the Basin Plan be revised to include a description of NPDES permit implementation procedures for toxicity related objectives.
- Revise Section 3 Beneficial Use Tables narrative to incorporate Tributary Rule. Current wording is “Specific waters which are not listed have the same beneficial uses as the streams, lakes or reservoirs to which they are tributary or the groundwater basins or subbasin to which they are tributary or overlies.” This wording should be broadened to reflect wording in the “Tributary Rule”: “(b) In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.”
- Revise Section 5 Prohibitions Applying to Inland Surface Waters (saline discharges). The Basin Plan does not explicitly prohibit the discharge of acids or caustics (whether neutralized or not), or excessively saline wastes to surface waters. These prohibitions should be added to the plan.
- Revise Section 5 Prohibitions Applying to Inland Surface Waters (sewage discharges). The Basin Plan now prohibits the discharge of untreated sewage to any “surface water streams.” This prohibition should be broadened to include “any inland surface water.”

Estimated Resources:

Staff time: 0.7 PY

Contract \$: none

Duration: 3 years

**Issue No. 14**

**Review/revise beneficial use designations for the following water bodies:**

- Irvine Lake – add IND and COMM
  - San Diego Creek (all reaches) – add RARE
  - Lytle Creek (valley reach) – add RARE
  - Cajon Creek (valley reach) – add RARE
  - City Creek (valley reach) – list reach individually, assign beneficial uses, and designate beneficial uses “X” (existing); add RARE
  - Peters Canyon Wash – list individually, assign beneficial uses, and designate beneficial uses “X”
  - San Sevaine Creek – list individually, assign beneficial uses, and designate beneficial uses “X”
  - Laguna Reservoir – review MUN exception
  - Lambert Reservoir – review all beneficial uses including MUN exception
  - Peters Canyon – review MUN exception
  - Siphon Reservoir – review MUN exception
  - Santa Ana River (Reach 4) – add RARE
  - Shay Meadows – add RARE; change beneficial uses from “I” (intermittent) to “X”
- (1) New (since 1998) information has become available indicating that a number of waters support recently listed rare, threatened and/or endangered species or their habitat; and, therefore, it is appropriate to add the RARE beneficial use to these waters.

- (2) Additionally, a number of minor streams are collectively listed and assigned beneficial uses in the current Basin Plan. New information indicates the need to review these listings and, if appropriate, individually list and assign beneficial uses to some of these streams.
- (3) USEPA reserved action on a previous Basin Plan amendment that excepted a number of water bodies for MUN beneficial use. These include several waters that are currently used exclusively for storage of agricultural irrigation water: Laguna Reservoir, Lambert Reservoir, Peters Canyon Reservoir, and Siphon Reservoir. These exceptions need to be reviewed.

Estimated Resources:

Staff time: 0.9 PY

Contract \$: none

Duration: 4 years

**Issue No. 15**

**Add discussion of Designated Maintenance Area ordinances as an avenue of compliance with Prohibitions Applying to Groundwaters, in Chapter 5.**

Designated Maintenance Areas (DMAs) need to be recognized in the Basin Plan as a mechanism for exemption from certain waste discharge prohibitions. San Bernardino County staff, working in conjunction with Board staff, developed and implemented a DMA ordinance for the Mill Creek prohibition area that allows on-site disposal systems (OSDS) not conforming to adopted exemption criteria to continue to operate within this prohibition area. Key features of the DMA include bringing existing OSDS up to Plumbing Code requirements, and regular OSDS inspections by qualified contractors. Board staff determined that compliance with this DMA satisfies the intent of the prohibition. The Basin Plan did not envision DMA compliance as a criterion for exemption, and the Plan should be amended accordingly.

Estimated Resources:

Staff time: 0.15 PY

Contract \$: none

Duration: 2 years

**Issue No. 16**

**Reevaluate temperature criteria to ensure full protection of aquatic life.**

The current temperature standard in the Basin Plan protects against adverse effects of heated water discharges on beneficial uses by expressing limits on temperature increases. USEPA has suggested that the temperature objective may be overly general and may not be adequately protective of aquatic life, particularly native species. USEPA's present policy is to protect for the most sensitive species in the water body by season. Optimal temperature values are available for various species for growth and survival at all life stages and should be reviewed.

Estimated Resources:

Staff time: 0.25 PY

Contract \$: undetermined

Duration: 1 year

**Issue No. 17**

**Update dissolved oxygen objectives for WARM/COLD beneficial uses.**

Comments from USEPA suggest that the Regional Board should consider optimal levels of dissolved oxygen for various life stages of salmonid fishes and other aquatic species. Criteria recommended by

USEPA in 1986 include warm and cold water dissolved oxygen values for embryonic, larval, and other life stages (Ambient Water Quality Criteria for Dissolved Oxygen, EPA 440/5-86-003, April 1986). Values are available for salmonid waters and non-salmonid waters with criteria ranging from “no production impairment” to “limit to avoid acute mortality.”

Estimated Resources:

Staff time: 0.25 PY  
 Contract \$: undetermined  
Duration: 1 year

**Issue No. 18**

**Review silver water quality objective for groundwater.**

The Basin Plan currently specifies a silver water quality objective of 0.05 mg/L for groundwater. The Maximum Contaminant Level (MCL) for silver has been revised to 0.1 mg/L. The Basin Plan should be updated to reflect the new MCL. This item was on the list of issues for the 1998 Triennial Review, but has yet to be addressed.

Estimated Resources:

Staff time: 0.25 PY  
 Contract \$: none  
Duration: 1 year

**Issue No. 19**

**Rewrite Animal Confinement Facilities (Dairies) discussion in Chapter 5.**

The Regional Board’s program to address waste discharges from confined animal facilities has evolved significantly, and the Basin Plan should be revised to reflect the current direction of these ongoing activities.

Estimated Resources:

Staff time: 0.25 PY  
 Contract \$: none  
Duration: 1 year

**Issue No. 20**

**Develop and adopt biological criteria for managing water quality**

Development of biological criteria was identified in USEPA’s *Water Quality Criteria and Standards Plan* (EPA 822-R-98-003, June 1998) as one of six priority objectives for the water quality standards program for this decade. USEPA indicates that the Regional Board should develop bioassessment and biocriteria consistent with USEPA’s technical guidance.

Estimated Resources:

Staff time: 2.0 PY  
 Contract \$: undetermined  
Duration: 1 year



**Issue No. 21****Santa Ana River, Reach 3 – add TOC water quality objective.**

Total organic carbon (TOC) is a direct measure of the organic content in water. The California Department of Health Services (DHS) has published draft (4-23-01) Groundwater Recharge Reuse regulations for groundwater recharge with recycled municipal water. The proposed TOC limit is dependent on the percentage of contribution of recycled water to the groundwater in storage. These regulations are applicable to the Santa Ana River, which is comprised primarily of recycled water and is a significant source of recharge in Orange County. It is appropriate to incorporate a TOC objective for the Santa Ana River, Reach 3, in order to protect the Orange County groundwater recharge activities.

Estimated Resources:

|                  |        |
|------------------|--------|
| Staff time:      | 0.1 PY |
| Contract \$:     | none   |
| <u>Duration:</u> | 1 year |

**Issue No. 22****Update discussion of the implementation of the antidegradation policy in Chapter 2 to address nonpoint source (NPS) pollution.**

The Basin Plan references State Board Resolution No. 68-16 as the State's antidegradation policy. USEPA has recommended that the discussion of implementation of the State's antidegradation policy in the Basin Plan should be expanded to clarify that the State has, in State Board Order No. 86-17 and in an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully consistent with the federal antidegradation policy. Further, the Basin Plan should consider and address how the policy is to be applied to NPS pollution.

Estimated Resources:

|                  |        |
|------------------|--------|
| Staff time:      | 0.2 PY |
| Contract \$:     | none   |
| <u>Duration:</u> | 1 year |

**Issue No. 23****Review Methylene Blue-Activated Substances (MBAS) water quality objective for surface waters.**

MBAS is an indicator for presence of detergents in water. Positive results may indicate the presence of wastewater. The 1995 Basin Plan specifies a MBAS water quality objective of 0.05 mg/L. In 1992, the Department of Health Services updated the MBAS secondary drinking water standard to 0.5 mg/L. The Basin Plan should be updated to reflect the updated standard.

Estimated Resources:

|                  |         |
|------------------|---------|
| Staff time:      | 0.05 PY |
| Contract \$:     | none    |
| <u>Duration:</u> | 1 year  |

**Issue No. 24****Santa Ana River, Reach 3 – Clarify the COD water quality objective.**

The Basin Plan specifies water quality objectives for the Santa Ana River, Reach 3, in order to protect Orange County groundwater subbasins. In the 1983 Basin Plan, Reach 3 objectives are specified as filtered objectives; however, the "filtered" specification was inadvertently omitted for COD from the 1995 Basin Plan.

Estimated Resources:

Staff time: 0.1 PY  
 Contract \$: none  
Duration: 1 year

**Issue No. 25****Update Chapter 5 Prohibitions Applying to Inland Surface Waters to include lakes.**

Section B.1. on page 5-5 of the Basin Plan states “The discharge of untreated sewage to any surface water stream, natural or man-made, or to any drainage system intended to convey stormwater runoff to surface water streams, is prohibited.” This statement should be revised to include lakes, reservoirs, and tributaries thereto.

Estimated Resources:

Staff time: 0.1 PY  
 Contract \$: none  
Duration: 1 year

**Issue No. 26****Update Chapter 5 Disposal of Hazardous and Nonhazardous Waste to reflect loss of SWAT program.**

The final section of Chapter 5 references the Solid Waste Assessment Test (SWAT) program, which was implemented in 1985. The purpose of the SWAT program was to determine whether hazardous or toxic substances above regulatory thresholds, or any other constituents which may threaten water quality, were migrating from a solid waste disposal facility. As of 1995, funding for this program ceased and is not expected to be reinstated. The Basin Plan should be amended to reflect this change.

Estimated Resources:

Staff time: 0.05 PY  
 Contract \$: none  
Duration: 1 year

**Issue No. 27****Consider need for clarification of Chapter 5 Minimum Lot Size Requirements and Exemption Criteria for New Developments (using onsite sewage disposal systems).**

There are areas in the Region where residential development is occurring on small lots where sanitary sewers are not available. Because of economic factors, there continues to be a demand for this type of development. Studies have shown that high density developments relying on on-site sewage disposal systems (OSDS) impact water quality by increasing concentrations of nitrates in groundwater. As a result, in 1989, the Board adopted Resolution No. 89-157 and amended the Basin Plan to require one-half acre minimum lots for new developments using OSDS. The Regional Board also adopted and subsequently revised certain criteria for exemptions from this lot size requirement. It is not clear that county and municipal planning and building authorities have applied the minimum lot size requirements and exemption criteria consistently and correctly, in part perhaps because of a lack of clarity in the requirements themselves. Board staff is addressing this matter with the involved agencies and may recommend some clarifications of the requirements.

Estimated Resources:

|                  |        |
|------------------|--------|
| Staff time:      | 0.1 PY |
| Contract \$:     | none   |
| <u>Duration:</u> | 1 year |

**Issue No. 28****Update the SLIC Program discussion in the Basin Plan.**

The Basin Plan currently contains a description of the SLIC program, the Regional Board's program to address groundwater contamination from volatile organic compounds (VOCs). The information/data in the description need to be updated to reflect current conditions.

Estimated Resources:

|                  |         |
|------------------|---------|
| Staff time:      | 0.05 PY |
| Contract \$:     | none    |
| <u>Duration:</u> | 1 year  |